E/ECE/324
E/ECE/TRANS/505 } Rev.1/Add.91/Amend.1 **/

16 July 1999

AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTED AND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS */

(Revision 2, including the amendments entered into force on 16 October 1995)

Addendum 91 : Regulation No. 92

Amendment 1

Supplement 1 to the original version of the Regulation - Date of entry into force: 7 February 1999

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF NON-ORIGINAL REPLACEMENT EXHAUST SILENCING SYSTEMS (RESS) FOR MOTORCYCLES, MOPEDS AND THREE-WHEELED VEHICLES

UNITED NATIONS

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*/ Former title of the Agreement:

Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

**/ Reissued for technical reasons.

GE.99-23443

Title, amend to read:

"UNIFORM PROVISIONS CONCERNING THE APPROVAL OF NON-ORIGINAL REPLACEMENT EXHAUST SILENCING SYSTEMS (RESS) FOR MOTORCYCLES, MOPEDS AND THREE-WHEELED VEHICLES"

Text of the Regulation:

General amendment: Throughout the text of the Regulation, the word "motorcycle(s)" should be replaced by "motorcycle(s), moped(s) or three-wheeled vehicle(s) ...". (This general amendment does not apply to paragraphs 4.1.1. and 4.3.1.1. of annex 3).

Paragraph 1, amend to read:

"1. SCOPE

This Regulation contains provisions relating to the approval of non-original RESS or components thereof to be fitted as replacement parts to one or more specific types of motorcycle, moped and three-wheeled vehicle."

Paragraphs 2.1. to 2.3., amend to read:

"2.1. "Non-original replacement exhaust system or components of this system" means a system of a type different from that fitted to the vehicle on approval or extension of approval. It may be used only as a replacement exhaust or silencing system.

2.2. "Non-original replacement exhaust system component" means one of the various components which together form the exhaust system; 1/

2.3. "Non-original replacement exhaust systems of different types" means silencing systems which differ significantly in such respects as:"

Paragraphs 2.4. to 2.6.1., amend to read:

"2.4. "Non-original replacement exhaust system (RESS) or component thereof" means any part of the exhaust silencing system defined in paragraph 2.1. above intended for use on a vehicle other than a part of the type fitted to the vehicle when submitted for type approval pursuant to Regulation No. 41, Regulation No. 63 or Regulation No. 9;

2.5. "Approval of a non-original RESS or component(s) thereof" means the approval of the whole or a part of a silencing system adaptable to one or several specified types of motorcycle, moped or three-wheeled vehicle, as regards the limitation of their noise level;

2.6. "Motorcycle, moped or three-wheeled vehicle type" means motorcycles, mopeds or three-wheeled vehicles which do not differ in such essential respects as:

2.6.1. The type of engine (two-stroke or four-stroke with reciprocating or rotary pistons; number and capacity of cylinders; number and type of carburettors or injection systems; arrangement of valves; maximum net power and corresponding engine speed).

For rotary piston engines, the cubic capacity should be taken to be double of the volume of the chamber;"

Paragraph 2.6.3., amend to read:

"2.6.3. Number, type and arrangement of exhaust silencing systems."

Paragraph 3.2.3., amend to read:

"3.2.3. Detailed drawings of each RESS component to enable it to be easily located and identified, and specification of the materials used. These drawings shall also indicate the location for the mandatory affixing of the approval number."

Paragraph 3.3.3., replace the words "Regulation No. 41" by "Regulation No. 41, Regulation No. 63 or Regulation No. 9."

Paragraphs 3.3.3.1. and 3.3.3.2., amend to read:

"3.3.3.1. If the motorcycle, moped or three-wheeled vehicle is of a type for which approval has been issued pursuant to the requirements of each of Regulations Nos. 41, 63 or 9:

The sound level, during the test in motion shall not exceed the specified limit by more than 1 dB(A);

The sound level during the stationary test shall not exceed by more than 3 dB(A), the level determined during the approval and indicated on the manufacturer's plate,

3.3.3.2. If the motorcycle, moped or three-wheeled vehicle is not of the type for which approval has been issued pursuant to the requirements of the Regulation, the sound level shall not exceed by more than 1 dB(A) the limit applicable at the time when it was first put on the road;"

Paragraph 3.4., should be deleted.

Paragraph 4.2., amend to read:

"4.2. These markings shall be clearly legible and indelible and also visible in the position at which the RESS is fitted."

Insert new paragraphs 4.4. to 4.6., to read:

"4.4. A component may carry several approval numbers if it has been approved as a component of several replacement exhaust systems.

4.5. The replacement exhaust system shall be supplied in a packaging or carry a label both providing the following particulars:

4.5.1. The tradename or mark of the manufacturer of the replacement silencing system and its components,

4.5.2. The address of the manufacturer or his representative,

4.5.3. A list of vehicle models for which the replacement silencing system is intended.

4.6. The manufacturer shall provide:

4.6.1. Instructions explaining in detail the correct method of mounting on the vehicle,

4.6.2. Instructions for handling the silencing system,

4.6.3. A list of components with the numbers of the corresponding parts, excluding retainers.

4.7. The approval mark."

Paragraph 5.4.1., The reference to footnote 1/ and footnote 1/ itself become references to footnote 2/ and footnote 2/. Amend the text of footnote 2/ to read:

"2/ 1 for Germany ... 15 (vacant), ... 24 for Ireland, 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30 (vacant), 31 for Bosnia and Herzegovina, 32 for Latvia, 33-36 (vacant), 37 for Turkey, 38-39 (vacant), 40 for The former Yugoslav Republic of Macedonia, 41 (vacant), 42 for the European Community (Approvals are granted by its Member States using their respective ECE symbol) and 43 for Japan. Subsequent numbers ... to the Agreement Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, ..."

Paragraph 6.1.1.5., amend to read:

"6.1.1.5. Its edges are not sharp or jagged and there is sufficient space for shock absorbers and springs."

Paragraph 6.2.1., amend to read:

"6.2.1. The acoustic efficiency of the RESS or components thereof shall be verified by means of the methods described in Regulation No. 41, Regulation No. 63 or Regulation No. 9. When the RESS or its components are fitted to the motorcycle, moped or three-wheeled vehicle described in paragraph 3.3.3. above, the sound level values obtained using the two methods (stationary and running vehicle) shall satisfy the following condition:

They shall not exceed the values measured in conformity with the requirements of paragraph 3.3.3., for the same moped, motorcycle, or three-wheeled vehicle when fitted with the original silencing system during either the running test or the stationary test."

Paragraphs 6.2.1. and 6.2.1.2. should be deleted.

Paragraph 6.3.3., amend the words "by more than 5%" to read "by more than ± 5%" and the words "maximum power and the maximum speed measured" to read "net power and the speed measured".

Paragraph 8., amend to read:

"8. CONFORMITY OF PRODUCTION

The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:"

Paragraph 8.2., should be deleted.

Paragraph 8.3., renumber as paragraph 8.2., and amend to read:

"8.2. The holder of the approval shall ensure that for each type of RESS at least the tests prescribed in paragraph 6. of this Regulation are carried out."

Paragraphs 8.3.1. to 8.4.4., should be deleted.

Paragraph 8.4.5., renumber as paragraph 8.3., and amend to read:

"8.3. The authority which has granted type approval may at any time verify the conformity control methods applied in each production facility. The normal frequency of these verifications shall be once every two years."

Insert a new paragraph 8.4.6., to read:

"8.4.6. The production is considered to conform to the requirements of this Regulation, if the provisions of Regulations Nos. 9, 41 and 63, corresponding to the type of vehicle, are complied with and if the sound level measured by the method described in the given

Regulations during the test in motion does not exceed by more than 3 dB(A) the sound level measured during the type approval and does not exceed by more than 1 dB(A) the limits prescribed in Regulations Nos. 9, 41 and 63 applicable.

Paragraph 9.2., amend to read:

"... the other Parties to the 1958 Agreement applying this Regulation, by means of a communication form conforming to the model contained in annex 1 to this Regulation."

Paragraph 10, amend to read:

"10. PRODUCTION DEFINITELY DISCONTINUED

If the holder of the approval completely ceases to manufacture a type of replacement silencing system or components thereof in accordance with this Regulation, he shall so inform the authority which granted the approval which shall in turn inform thereof the other Parties to the 1958 Agreement applying this Regulation, by means of a copy of the communication form conforming to the model contained in annex 1 to this Regulation."

Annex 1, amend to read:

"Annex 1

COMMUNICATION

(maximum format: A4 (210 x 297 mm))

issued by: Name of administration:
.....
.....
.....

concerning: 2/ APPROVAL GRANTED
APPROVAL EXTENDED
APPROVAL REFUSED
APPROVAL WITHDRAWN
PRODUCTION DEFINITELY DISCONTINUED

of a vehicle type with regard to a type of RESS or component thereof pursuant to Regulation No. 92.

Approval No.: ... Extension No.: ...

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6. Trade name or mark of the motorcycle, moped or three-wheeled vehicle type(s) for which the RESS is intended: . . . . . .

7. Vehicle type(s), starting with serial number: . . . . . .

8. Type of engine 3/: . . . . . .
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17. Load conditions of vehicle during test: . . . . . .

18. Sound levels:

Vehicle in motion: . . . . . dB(A)
Vehicle stationary: . . . . . dB(A) with engine speed of: . . . . min^{-1}

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25. Approval granted/extended/refused/withdrawn 2/

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1/ Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.

3/ In the case of a non-conventional type of engine, please specify."

Annex 3,

Insert a new paragraph 4.1.1., to read:

"4.1.1. MOTORCYCLES"

Paragraphs 4.1.1. to 4.1.4., become paragraphs 4.1.1.1. to 4.1.1.4.

Insert new paragraphs 4.1.2. to 4.1.3.4., to read:

"4.1.2. MOPEDS

4.1.2.1. The minimum distance to be covered during conditioning shall be 2,000 km.

4.1.2.2. 50 per cent ± 10 per cent of this conditioning cycle shall consist of town driving and the remainder of long-distance runs; the continuous road cycle may be replaced by a corresponding test-track programme.

4.1.2.3. The two speed regimes must be alternated at least six times.

4.1.2.4. The complete test programme must include a minimum of 10 breaks of at least three hours' duration in order to reproduce the effects of cooling and condensation.

4.1.3. THREE-WHEELED VEHICLES

4.1.3.1. Depending on the category of vehicle, the minimum distance to be completed during conditioning shall be:

Category of vehicle according to cylinder capacity (in cm^3)	Distance (km)
1. ≤ 250	4,000
2. > 250 ≤ 500	6,000
3. > 500	8,000

4.1.3.2. 50 per cent ± 10 per cent of this conditioning cycle shall consist of town driving and the remainder of long-distance runs at high speed; the continuous road cycle may be replaced by a corresponding test-track programme.

4.1.3.3. The two speed regimes must be alternated at least six times.

4.1.3.4. The complete test programme must include a minimum of 10 breaks of at least three hours' duration in order to reproduce the effects of cooling and condensation."

Insert a new paragraph 4.3.1.1., to read:

"4.3.1.1. MOTORCYCLES"

Paragraphs 4.3.2. to 4.3.5. become paragraphs 4.3.1.1.1. to 4.3.1.1.4.

Insert new paragraphs 4.3.1.2. to 4.3.1.3.4., to read:

"4.3.1.2. MOPEDS

4.3.1.2.1. Conditioning consists of three test cycles.

4.3.1.2.2. Each test-bench cycle must be followed by a break of at least six hours' duration in order to reproduce the effects of cooling and condensation.

4.3.1.2.3. Each test-bench cycle shall consist of six phases. The engine conditions for the duration of each phase shall be:

Phase	Conditions	Duration of phase (in minutes)
1	Idling	6
2	25% load at 75% of S	40
3	50% load at 75% of S	40
4	100% load at 75% of S	30
5	50% load at 100% of S	12
6	25% of load at 100% of S	22
	Total time	2 h.30 min

4.3.1.2.4. During this conditioning procedure, at the request of the manufacturer, the engine and the silencer may be cooled in order that the temperature recorded at a point not more than 100 mm from the exhaust gas outlet does not exceed that measured when the moped is running at 75 per cent of S in top gear. The engine and/or moped speeds shall be determined to within ± 3 per cent.

4.3.1.3. THREE-WHEELED VEHICLES

4.3.1.3.1. Conditioning shall consist of the specified number of test-bench cycles for the category of vehicle for which the exhaust system was designed. The number of cycles for each vehicle category shall be:

Category of vehicle according to cylinder capacity (in cm^3)	Number of cycles
1. ≤ 250	6
2. > 250 ≤ 500	9
3. > 500	12

4.3.1.3.2. Each test-bench cycle must be followed by a break of at least six hours' duration in order to reproduce the effects of cooling and condensation.

4.3.1.3.3. Each test-bench cycle shall consist of six phases. The engine conditions for and the duration of each phase shall be:

Phase	Conditions	Duration of phase	
		Engines of less than 250 cm^3	Engines of not less than 250 cm^3
		(min.)	(min.)
1.	Idling	6	6
2.	25% load at 75% of S	40	50
3.	50% load at 75% of S	40	50
4.	100% load at 75% of S	30	10
5.	50% load at 100% of S	12	12
6.	25% load at 100% of S	22	22
	Total time	2 h.30 min.	2 h.30 min.

4.3.1.3.4. During this conditioning procedure, at the request of the manufacturer, the engine and the silencer may be cooled in order that the temperature recorded at a point not more than 100 mm from the exhaust gas outlet does not exceed that measured when the vehicle is running at 110 km/h or 75 per cent of S in top gear. The engine and/or vehicle speeds shall be determined to within ± 3 per cent."